

## Koch, Kristine

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**From:** Jeremy\_Buck@fws.gov  
**Sent:** Thursday, August 01, 2013 4:51 PM  
**To:** Shephard, Burt  
**Cc:** peterson.Jennifer@deq.state.or.us  
**Subject:** RE: updated DDX SLVs

Yes, we were thinking of a 10-year cycle to monitor egg contaminants. The osprey eggs from Portland Harbor had lower contaminants than expected (given the concentrations observed in Portland Harbor fish) but were much higher than the upstream reference eggs, and the egg from Swan Island lagoon nest had a whopping load of PCBs. So, it seems ospreys are fairly good at representing the local site (although the egg from the Arkema site had no higher DDE than other eggs, so I think DDE exposure is better represented site wide with ospreys).

It would be nice to have an egg from each river mile in the Study Area (and by the time we have another egg collection there will likely be enough osprey nests to collect 12 samples from), and another 10 or so upstream. So, one could plan on a collection of 20 eggs every 10 years. The primary purpose is to be able to document the decline in egg concentrations over time in Portland Harbor. We expect to see this decline based on natural attenuation, as we have observed in the lower Columbia River, but also to document success of remediation. The goal for success would be to have the contaminants in Portland Harbor osprey eggs to achieve baseline values (i.e., no difference than upstream reference eggs, or have values below detection limits). Once the baseline levels were achieved, the monitoring could stop or shift to monitoring only specific, problematic nest sites (i.e., like Swan Island Lagoon).

Because we have already documented declines in both eagle and osprey eggs in the lower Columbia River, we know that natural attenuation with organochlorines is occurring in our system and ospreys are a good indicator for this. It seems the eggs are less subject to variation as compared to fish tissue, and so they may provide a more robust media to document an actual decline after remediation efforts when one really exists (it may be hard to separate remediation from natural declines but both are important, and there would be natural declines in any media sampled). Pairing osprey monitoring with some fish tissue monitoring, such as with smallmouth bass, could provide a good basis for a tissue monitoring plan. They would be good for monitoring DDX, PCBs, and dioxins and furans if needed. Mercury would be good too, and any phthalates or diphenyl ethers that are considered a CoC.

For bald eagles, there really aren't enough nest sites in Portland Harbor to sample yet. We figure the area could support about 7 nests sites, and there are about 4 now. Also, eagles tend to abandon nests when an egg is collected, so it is not worth ruining the productivity of the nest site when we cannot get enough samples to justify it. We could obtain blood from nestlings to monitor recent exposure from prey brought to the nest, but this would be more of a special study evaluating exposure and likely would not be good for long term monitoring at this point. If we get an abandoned eagle nest in the area, we can try and get some addled eggs to minimize disturbance.

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**From:** Shephard, Burt [mailto:[Shephard.Burt@epa.gov](mailto:Shephard.Burt@epa.gov)]  
**Sent:** Thursday, August 01, 2013 3:44 PM  
**To:** [Jeremy\\_Buck@fws.gov](mailto:Jeremy_Buck@fws.gov)  
**Cc:** [peterson.Jennifer@deq.state.or.us](mailto:peterson.Jennifer@deq.state.or.us)  
**Subject:** RE: updated DDX SLVs

Thank you, Jeremy.

I suspect I'll have a question or two for you, but so far I've been able to follow the logic of the spreadsheet.

Different subject, I'm putting together a first draft of BERA team recommendations for our RPMs for going forward from the BERA to the FS. Going back through meeting and call notes I've got over 30 specific recommendations so far. One of the ones I have for wildlife is to use osprey and/or bald eagle eggs to monitor remedy effectiveness for chemicals such

as DDT and PCBs. Is that something that is still on the table that you and others wanted to see? I seem to remember some discussions with LWG about this a couple of years ago.

Best regards,

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"Facts are stubborn things"  
- John Adams

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**From:** Jeremy Buck [mailto:[jeremy\\_buck@fws.gov](mailto:jeremy_buck@fws.gov)]

**Sent:** Thursday, August 01, 2013 1:28 PM

**To:** Shephard, Burt

**Cc:** [peterson.Jennifer@deq.state.or.us](mailto:peterson.Jennifer@deq.state.or.us)

**Subject:** updated DDX SLVs

Hi Burt-

The attached calculates the SLVs (and ATLs and TRVs) for DDE and total DDx, based on the egg approach and the dietary approach. Calculations are all done with generic BSAF of 4. Let me know if you have any comments, or I can walk you through it if you want. Be good to get Jennifer's take on it at some point.

Main issue is when using a bald eagle SLV, how does site use factor come in, considering the larger range of the eagle compared to other birds (but restricted to 1 mile around the nest site as a foraging area). Any reason that should impact the SLV directly?